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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/767,302	01/23/2001	Kazuyuki Sato	FUSA 18.263	3527
26304	7590	01/19/2006		
KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585			EXAMINER DENNISON, JERRY B	
			ART UNIT	PAPER NUMBER
			2143	
DATE MAILED: 01/19/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/767,302

Applicant(s)

SATO ET AL.

Examiner

J. Bret Dennison

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Action is in response to Application Number 09/767302 received on 13 October 2004.
2. Claims 1-3 and 5-9 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites that limitation, "a main controller having routing data generators that are associated with respective ones of line speeds". It is unclear to Examiner if each data generator has "more than one" line speed, or if each data generator has "one or more" line speeds. Examiner suggests language such as "data generators, each associated with a line speed".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanabe et al. (U.S. Patent Number 5,333,131) in view of Hsu (U.S. Patent Number 6,363,319).

3. Regarding claim 1, Tanabe disclosed a routing apparatus for obtaining routing data conforming to a destination address of a packet that arrives from a line, adding the routing data onto the packet, and switching the packet based upon the routing data to send the packet to a prescribed line, comprising:

a main controller having a routing data generator for generating routing data conforming to a requested destination address and sending the routing data to a requesting source (Tanabe, col. 6, lines 4-5);

a line interface for extracting a destination address from a packet that arrives from a line, generating routing-data request for requesting said main controller to be notified of routing data conforming to this destination address, adding the routing data of which notification has been given by said main controller onto the packet and then outputting the packet (Tanabe, col. 5, lines 55-67 and col. 6, lines 4-60); and

a switch for sending the routing data request, which enters from a prescribed line interface, to the main controller, sending the routing data from said main controller to a line interface of the requesting source, and switching a packet with attached routing data based upon the routing data to thereby send the packet to another line interface (Tanabe, col. 6, lines 25-35).

Tanabe does not explicitly state wherein said main controller has routing data generators that are associated with respective ones of line speeds;

said line interface adds a line identifier onto a destination address of a packet that arrives from a line so that the routing-data request is created and requests said main controller to be notified of routing data; and

said main controller responds to the request by generating routing data from whichever routing data generator corresponds to a line speed indicated by the line identifier and sending this routing data to the line interface that is the requesting source.

In an analogous art, Hsu disclosed a method and apparatus for selecting routes in communication networks (Hsu, col. 2, lines 49-52) in which Multi-Protocol Label Switching is used through explicit routing (col. 2, line 65 through col. 3, line 3) where constraints associated with a flow include a bandwidth requirement, which is met by considering only links with sufficient bandwidths (Hsu, col. 3, line 10-24).

One of ordinary skill in the art would interpret "line speed" as the available bandwidth on the line since bandwidth means the speed at which data is transferred. Therefore, the selection based on bandwidth is the same as selection based on line speed.

Tanabe and Hsu are analogous art since both provide label conversion for packets in route to their destination (Tanabe, col. 6, lines 60-65, Hsu, col. 2, line 65-col. 3, line 5). The teachings of Hsu benefit the teachings of Tanabe by determining the most efficient route based on bandwidth (Hsu, col. 3, lines 10-15).

Therefore it would have been obvious to one in the ordinary skill in the art at the time of the invention to incorporate the teachings of Hsu into the system of Tanabe to more efficiently select routes in a system of networks (Hsu, col. 1, lines 35-40) leading to less traffic congestion and degradation of service quality (Hsu, col. 1, lines 30-35).

4. Regarding claim 2, Tanabe and Hsu disclose the features of the invention, substantially as claimed, as described in claim 1, including wherein said routing data generator of said main controller includes:

an associative memory for storing routing data (Tanabe, col. 9, lines 55-63);

a key-data memory for storing key data conforming to destination addresses (Tanabe, col. 13, lines 38-40);

a converter which, when key data conforming to the requested destination address exists in said key-data memory, is for converting this key data to an address of said associative memory (Tanabe, col. 13, lines 38-46); and

a routing-data sending unit for reading routing data out of the associative memory from this address and sending this routing data to the line interface that is the requesting source (Tanabe, col. 13, lines 40-42, Tanabe teaches the controller accessing the VP table and selecting some originating transit lines on which the VP destined for the terminating local node is established).

5. Regarding claim 5, Tanabe and Hsu disclose the features of the invention, substantially as claimed, as described in claim 4, including wherein lines having any line speeds are connected to said line interface (Tanabe, col. 5, lines 58-61).

6. Regarding claim 6, Tanabe and Hsu disclose the features of the invention, substantially as claimed, as described in claim 2, including wherein each line interface adds a key flag onto a packet for the routing-data request to be sent to said main controller, adds a data flag onto a packet and inputs the result to said switch; and said switch sends the packet with the attached key flag to said main controller and sends the packet with the attached data flag to a line interface on the output side based upon the routing data (Tanabe, col. 6, lines 54-67, Tanabe teaches the line interfaces extracting routing data information for a read address and header information. col. 7, lines 43-67, Tanabe teaches that the switch responds to an output port number to which the input packet is to be delivered).

Claims 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanabe in view of Hsu, as applied to claims 1 and 2, and further in view of Segal (U.S. Patent Number 5,737,404).

7. Regarding claim 3, Tanabe and Hsu disclose the features of the invention, substantially as claimed, as described in claim 2. However, Tanabe does not teach

wherein said main controller is provided in duplicate to furnish a working main controller and a standby main controller;

when the working main controller updates content stored in each of said memories, said main controller updates also content stored in each of the memories of the standby main controller; and

when the working main controller develops a failure, the standby main controller continues routing control by serving as a new working main controller.

In an analogous art of networking, Segal teaches wherein all content is duplicated and forwarded to the standby processing module (Segal, col. 7, lines 25-50).

Tanabe, Hsu, and Segal are analogous art because they include transmitting data through a packet based network using a routing table in memory.

Therefore it would have been obvious to one in the ordinary skill in the art at the time of the invention to combine Tanabe and Hsu with Segal to provide a system containing a standby controller for the benefit of backing up the main controller and being able to assume the active status in the event of the failure of the main controller (Segal, col. 8, lines 5-12).

Allowable Subject Matter

8. Claims 7-9 are in condition for allowance in view of the Applicant's arguments and the cited prior art of record. Independent claim 7 recites a routing apparatus for obtaining routing data conforming to a destination address of a packet that arrives from a line, adding the routing data onto the packet, and switching the packet based upon the routing data to send the packet to a prescribed line, including a main controller, a line

interfaces, a switch, and data generators, the generators including memory for routing data, a key-data memory for storing key data conforming to destination addresses, a converter for converting key data to an address, a routing data sending unit to send to the line interface that is the requesting source, wherein said associative memory and key-data memory are constituted by contiguous key-data and associative data storage areas where the number of items of key data and the number of items of associative data that can be registered is calculated using an equation $e=y/(k+r)$, where y represents the total number of single byte cells of said memory array, k being the width of the key data in bytes, and r being the width of the associative data inclusive of routing data, and read/write control is performed for reading and writing the key data and associative data from and to said key data storage area and associative data storage area respectively of said memory array based on k , r , and e , which, in addition to the rest of the claim limitations, are distinguished from the prior art. For support, see Instant Specification (See Spec, page 11, lines 5-30, page 13, line 24 through page 14, line 20, page 30, lines 5-15, page 32, lines 5-30, page 33, lines 1-15).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Bret Dennison whose telephone number is 571-272-

3910. The examiner can normally be reached on Monday-Thursday 9am-5:30pm Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JBD

Response to Arguments

9. Applicant's arguments filed 13 October 2004 have been fully considered but they are not persuasive. Applicant's arguments are deemed moot in view of the following new grounds of rejection as explained here below, necessitated by Applicant's substantial amendment (i.e., *by incorporating the limitations of claim 4 in to independent claim 1 will require further search and consideration*) to the claims which significantly affected the scope thereof.

10. It is the Examiner's position that Applicant has not yet submitted claims drawn to limitations, which define the operation and apparatus of Applicant's disclosed invention in manner, which distinguishes over the prior art.

11. Failure for Applicant to significantly narrow definition/scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant intends broad interpretation be given to the claims. The Examiner has interpreted the claims with scope parallel to the Applicant in the response and reiterates the need for the Applicant to more clearly and distinctly define the claimed invention.

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Bret Dennison whose telephone number is (571) 272-3910. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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